

REMARKS

Claims 1-20 are pending in this application. Claims 1-20 stand rejected. By this Amendment, claims 1, 2, 10, and 11 have been amended. The amendments made to the claims do not alter the scope of these claims, nor have these amendments been made to define over the prior art. Rather, the amendments to claims 1, 2, 10, and 11 have been made to improve the form thereof. In light of the amendments and remarks set forth below, Applicant respectfully submits that each of the pending claims is in immediate condition for allowance.

On page 7 of the current Office Action, the Examiner responds to the arguments presented in Applicant's July 9, 2003 amendment. Applicant disagrees with the Examiner's remarks referring to claims 1 and 10. Applicant reasserts that Horii fails to teach a drive waveform signal selected and generated at the time of scanning so that a dot with one of a plurality of grey scales is generated. In other words, Applicant explicitly claims that, while scanning the ink jet recording head in a first direction, a plurality of drive waveform signals are generated. These drive waveform signals are selected and applied to the nozzles of the ink jet heads so that only one or none of the drive waveform signals is applied to each of the nozzles. As such, a single drive waveform signal is applied to each nozzle to produce the drop of ink.

The Examiner recognizes that Horii does not produce its dots using a single drive waveform signal but that "a new composite drive signal waveform is generated" (emphasis added). It is clear that Horii does not use a single drive waveform signal but uses a composite drive waveform signal to generate the drive

waveform signal used to create the plurality of different dots. As such, Applicant respectfully requests the Examiner withdraw the rejection and pass the pending claims to issue.

Paragraph 1 of the Office Action rejects claims 1, 3, 10, and 12 under 35 U.S.C. § 102(e) as being anticipated by Horii (U.S. Patent No. 6,283,568). Applicant respectfully requests withdrawal of this rejection.

To anticipate a claim under 35 U.S.C. § 102, the cited reference must disclose every element of the claim, as arranged in the claim, and in sufficient detail to enable one skilled in the art to make and use the anticipated subject matter. See, PPG Industries, Inc. v. Guardian Industries Corp., 75 F.3d 1558, 1566 (Fed. Cir. 1996); C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1349 (Fed. Cir. 1998). A reference that does not expressly disclose all of the elements of a claimed invention cannot anticipate unless all of the undisclosed elements are inherently present in the reference. See, Continental Can Co. USA v. Monsanto Co., 942 F.2d 1264, 1268 (Fed. Cir. 1991).

Independent claim 1 requires “selecting for each of said plurality of nozzles only one or none of said plurality of drive waveform signals” and claim 10 requires “drive means for applying said drive waveform signals to said piezoelectric actuators by selecting none or only one of a plurality of drive waveform signals”. Neither of these limitations is taught or disclosed in Horii.

In Horii, as recognized by the Examiner, a composite drive signal waveform is generated to produce a plurality of different dots. This is unlike

Applicant's explicitly recited limitation which requires that only one or none of the drive waveform signals be used to create the dot.

As such, Applicant respectfully requests withdrawal of this rejection.

Paragraph 2 of the Office Action rejects claims 2, 4-7, 11, and 13-17 under 35 U.S.C. § 103(a) as being unpatentable over Horii in view of Shimada (U.S. Patent No. 6,293,643).

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify a reference or combine references to arrive at the claimed subject matter. The prior art references must also teach or suggest all the limitations of the claim in question. See, M.P.E.P. § 706.02(j). A reference can only be used for what it clearly discloses or suggests. See, In re Hummer, 113 U.S.P.Q. 66 (C.C.P.A. 1957); In re Stencel, 4 U.S.P.Q.2d 1071, 1073 (Fed. Cir. 1987). Here, the references, whether taken individually or in combination, do not disclose or suggest the invention claimed by the Applicant.

Applicant respectfully requests reconsideration and withdrawal of this rejection. As discussed above, Horii fails to disclose an apparatus or method where for each of the nozzles only one or none of said plurality of drive waveform signals is applied to each nozzle so that a dot is formed. In Horii, a composite signal is used not a single drive waveform signal.

Shimada fails to cure the deficiency in Horii discussed above. In Shimada, the diameter of dots is changed by changing combinations of the density and dots diameter. The plurality of droplets are generated from one wave generating circuit according to the compounded waveform. Thus, Shimada does not cure the deficiencies in Horii above and those claims should be allowed.

Paragraph 3 of the Office Action rejects claims 8, 9, 18, and 20 under 35 U.S.C. § 103 over Horii in view of Shimada and further in view of Fujimori (U.S. Patent No. 6,338,542). Claims 8, 9, 18, and 20 depend from allowable claims and include additional limitations which are also believed to be directed towards patentable subject matter. Further, addition of the Fujimori reference fails to cure the deficiencies in Horii and Shimada discussed above. In Fujimori, the plurality of droplets are generated from one wave generating circuit according to a compounded waveform. As such, the waveform is generated in a manner similar to that of Horii. Therefore, Fujimori also fails to disclose that only one or none of said plurality of drive waveform signals is used to generate each dot.

Applicant has responded to all of the rejections and objections recited in the Office Action. Reconsideration and a Notice of Allowance for all of the pending claims are therefore respectfully requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

If the Examiner believes an interview would be of assistance, the Examiner is welcome to contact the undersigned at the number listed below.

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Respectfully submitted,

By _____

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